BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of		
Application by Verizon New England Inc., Verizon Delaware Inc., Bell Atlantic Communications, Inc. (d/b/a Verizon Long Distance), NYNEX Long Distance Company (d/b/a Verizon Enterprise Solutions), Verizon Global Networks, Inc., and Verizon Select Services Inc., for Authorization To Provide In-Region, InterLATA Services in New Hampshire and Delaware	)	WC Docket No. 02-157

DECLARATION OF MICHAEL LIEBERMAN
ON BEHALF OF AT&T CORP.

I. QUALIFICATIONS AND SUMMARY

1. My name is Michael R. Lieberman. I am a District Manager in AT&T's Law and Government Affairs organization. In this position I am responsible for providing financial and industry analytical support relating to the costing and pricing of local telecommunications services. I was AT&T's primary participant in the development of the HAI/Hatfield Model of forward looking economic costs for local exchange networks and services, and I have been responsible for evaluating other costing models and methodologies such as the BCPM and the FCC's Synthesis Model. I have a Bachelor's degree in mathematics and a Master's degree in statistics from the State University of New York at Stony Brook. Prior to joining AT&T as a statistical consultant in 1978, I was a bio-statistical consultant with Carter-Wallace of Cranbury, New Jersey. The purpose of my testimony is to explain why Verizon's Delaware and New Hampshire UNE rates are not TELRIC-compliant.

2. First, I demonstrate that Verizon's Delaware non-loop recurring rates are substantially higher, on a cost adjusted basis, than those in New York, a state that even Verizon concedes is a valid benchmark against which to assess its Delaware UNE rates. In particular, Verizon's Delaware non-loop rates exceed Verizon's New York rates by 48 percent on a cost adjusted basis. I also demonstrate that Verizon's switching costs in New Hampshire are 13 percent higher than those in New York on a cost adjusted basis.

3. Second, I show that one reason why Verizon's Delaware and New Hampshire UNE rates are so overstated is that those rates are based on hopelessly outdated pre-1997 data. Publicly available data confirms that Verizon's Delaware and New Hampshire switching and loop costs have declined by more than 25 percent since that time. Thus, even if Verizon's Delaware and New Hampshire rates approximate 1997 forward-looking costs (and Verizon has not established that they do), those rates far exceed properly computed 2002 forward-looking costs.

4. Third, I demonstrate that Verizon's inflated UNE rates preclude competitive entry in Delaware. As I show below, the margin available to new entrants in Delaware that use a margin-maximizing combination of UNE and resale entry is $2.79 on a state-wide basis. This margin is not remotely sufficient to cover an efficient entrant's internal costs, which as demonstrated in the attached declaration of Stephen Bickley exceed $10.00 per line per month.

II. VERIZON'S DELAWARE AND NEW HAMPSHIRE NON-LOOP AND SWITCHING RATES ARE NOT TELRIC COMPLIANT.

5. As demonstrated in the declarations of Catherine Pitts and Michael Lieberman, Verizon's Delaware switching rates are infected by myriad clear TELRIC errors. These TELRIC errors inflate Verizon's Delaware and New Hampshire non-loop rates by at least 126 percent.

See Baranowski/Pitts Decl. My analysis confirms that Verizon's Delaware and New Hampshire rates are vastly overstated.

A. Verizon's Delaware Non-Loop Rates Greatly Exceed Those Of New York On A Cost Adjusted Basis.

6. The Commission has in the past used Verizon's New York UNE rates to determine whether Verizon's UNE rates in other states are within a range that a reasonable application of TELRIC principles would have produced. *See, e.g., NJ 271 Order* ¶ 50; *VT 271 Order* ¶ 26; *RI 271 Order* ¶ 39. As shown in Table 1 (below), Verizon's Delaware non-loop rates exceed those in New York by 64 percent. Yet, Verizon's Delaware non-loop costs are only 10 percent above those in New York. *See* Table 1 (below). There is no question, therefore, that the difference between Verizon's Delaware and New York non-loop costs (10 percent) do not remotely account for the substantial difference in non-loop rates between those states (64 percent). *See* Table 1 (below).

Table I

Verizon Cost Adjusted Non-Loop and Switching UNE Rates
(State-Specific Volumes)

	Delaware	New York	Difference
Total Non-Loop Rate (per-line, per-month)	$ 9.11	$ 5.56	64%
UNE Synthesis Model Non-Loop Cost	$ 3.89	$ 3.52	10%
Percent Difference in Cost Adjusted Non-Loop UNE Rates			48%
Total Switching Rate (per-line, per-month)	$ 8.30	$ 5.29	57%
UNE Synthesis Model Switch Cost	$ 3.47	$ 3.26	7%
Percent Difference in Cost Adjusted Switching UNE Rates			48%

7. Verizon does not deny this fact. Instead, Verizon invites the Commission to ignore them – and Commission precedent – and "benchmark" the sum of Verizon's Delaware

loop and non-loop rates to the sum of its loop and non-loop rates in other states. The Commission has never approved a section 271 application on the basis of such a "kitchen sink" comparison, and for good reason. A BOC's rates for a network element comply with Checklist Item 2 only if they are "based on the cost . . . of providing . . . *the* network element." 47 U.S.C § 252(d)(1) (emphasis added). Therefore, to gain § 271 approval, a BOC must show that the rates for each of its network elements complies with TELRIC principles.

8. Indeed, the whole purpose of unbundling is to allow an entrant to purchase – at cost-based rates – only the elements necessary to implement its particular entry strategy. If a BOC were free to evade the requirement to offer each element that qualifies for unbundling at cost-based rates by offering some elements at low rates and others at inflated rates, the BOC would have the ability to tailor its rates to impede the entry strategies that posed the greatest risk to its local monopolies. Moreover, CLECs are not indifferent to the level of non-loop and loop costs. A substantial portion of non-loop costs are recovered on a usage basis, whereas loop costs are fixed. A CLEC that serves high usage customers, therefore, would be very sensitive to usage costs, and less sensitive to non-usage costs.[1]

9. To be sure, the Commission has recognized that the potential arbitrariness of certain allocations may require some combination of rate elements to achieve meaningful comparisons. The Commission has, for example, compared total switching costs (and even total non-loop costs) in recognition of the fact that states may differ in the ways that they allocate such costs among usage and port charges. However, no such issues arise with non-loop and loop-

[1] Verizon has in the past claimed that its kitchen sink approach is appropriate because no CLEC *currently* purchases switching elements separately from loop elements. If Verizon were permitted to charge above-cost rates for certain elements simply because they were not purchased separately today, that would enable Verizon to foreclose all future entry strategies that rely on purchasing those elements separately.

related costs because the Commission's rules specifically prohibit state commissions from allowing carriers to allocate loop-related costs to a switching element or vice-versa. *See* 47 U.S.C. 51.509(a)-(b). *See also PA 271 Order* ¶ 66 ("we consider the reasonableness of loop and non-loop rates separately"); *KA/OK 271 Order* ¶¶ 82-95 (comparing loop costs only); *MA 271* ¶ 26 (comparing only non-loop rates).

10. Where, as here, the applicant's non-loop rates are higher (on a cost-adjusted basis) than those in a valid benchmark state, the applicant must prove – with specific cost evidence – that its non-loop rates are appropriately cost-based. Verizon did not, and could not, do that.

B. Verizon's New Hampshire Switching Rates Greatly Exceed Those Of New York On A Cost Adjusted Basis.

11. As noted above, the Commission has in the past used the Synthesis Cost Model to make cost-adjusted state-to-state comparisons of non-loop rates – which include the costs of the switch port, switch usage, switch features, transport, signaling, and tandem switching. However, such a comparison is not appropriate when comparing rates in very rural states (*e.g.*, New Hampshire) to rates in more densely populated states (*e.g.*, New York) because the Synthesis Cost Model substantially overstates non-loop costs in rural states relative to less rural states, thereby substantially overstating the level of non-loop *rate differences* that might be justified by costs.

12. There is no question that the Synthesis Cost Model substantially overstates non-loop costs in New Hampshire (a very rural state). For example, the Synthesis Cost Model places OC-48 transport rings in virtually all cases.[2] While this design is appropriate for geographic areas with high volumes of interoffice transport traffic (such as New York), it causes the model to overbuild the transport network in more rural, low-traffic volume areas (such as New

[2] The Synthesis Cost Model does allow OC-3 rings for host-remote configurations.

Hampshire). This problem is compounded by the default inputs used in the Synthesis Cost Model, which are the same for both high-density (New York) and low-density (New Hampshire) areas. For instance, the model assumes the same percent of inter-office traffic for both New York and New Hampshire. In reality, of course, the fraction of inter-office traffic – and hence the cost of inter-office facilities – in New Hampshire is less than in New York.[3] However, the Synthesis Model does not reflect these differences and will therefore construct inter-office facilities (*i.e.*, transport and tandem switching) in New Hampshire that are designed to carry a higher proportion of inter-office calls – thereby overbuilding the network and inflating the costs relative to New York.

13. Because the Commission's Synthesis Cost Model is a poor indicator of non-loop cost differences between New Hampshire (a very rural state) and New York (a much less rural state), Verizon's assertion that this Commission should rubber stamp its New Hampshire non-loop rates based on a non-loop benchmarking analysis between New Hampshire and New York must be rejected.

14. To the extent that any switching-related benchmark analysis between New Hampshire and New York is appropriate, that analysis should at least exclude the costs of transport facilities and tandem switches (*i.e.*, inter-office facilities) from the benchmarking analysis, and focus on the central switching rate elements (*i.e.*, the switch port, switch usage, switch features and signaling). I have conducted such an analysis. *See* Table 2 (below).

[3] According to Verizon, inter-office calls represent *** *** of calls in New York while they represent only *** *** of calls in New Hampshire.

Table 2

Verizon Cost Adjusted Switching UNE Rates
(State-Specific Volumes)

	New Hampshire	New York	Difference
Total Switching Rate (per-line, per-month)	$ 6.60	$ 5.52	20%
UNE Synthesis Model Switch Cost	$ 3.46	$ 3.26	6%
Percent Difference in Cost Adjusted Switching UNE Rates			13%

15. This analysis confirms that Verizon's New Hampshire switching rates cannot be justified by a comparison to Verizon's New York switching rates. Indeed, Verizon's New Hampshire switching rates are 13 percent higher than those in New York on a cost adjusted basis.

16. Moreover, this substantial difference in switching rates should preclude the Commission from validating Verizon's UNE rates using a benchmark approach. I understand that a BOC's rates for a network element comply with Checklist Item 2 only if they are "based on the cost . . . of providing . . . *the* network element." 47 U.S.C § 252(d)(1) (emphasis added). Therefore, to gain § 271 approval, a BOC must show that the rates for each of its network elements – including switching – complies with TELRIC principles. Verizon has not, and cannot do so.[4] Thus, even if a meaningful comparison of Verizon's New Hampshire and New York non-loop rates could be implemented (which it cannot), the fact that Verizon's New Hampshire *switching* rates are 13% higher than in New York on a cost adjusted basis is fatal to Verizon's claim that its rates can be rubber-stamped by this Commission.

[4] Verizon also invites the Commission to ignore any analysis of separate rate elements and, instead, consider only a combined non-loop and loop benchmark comparison between New Hampshire and New York. For the reasons stated in paragraphs 11-16 above, the Commission must reject Verizon's invitation.

III. VERIZON'S DELAWARE AND NEW HAMPSHIRE LOOP AND NON-LOOP RATES ARE INFLATED BECAUSE THEY RELY ON HOPELESSLY OUTDATED DATA.

17. Verizon's overstated recurring UNE rates in Delaware and New Hampshire are traceable, at least in part, to the fact that the cost studies used to develop those rates are based on pre-1997 data. That hopelessly outdated data plainly does not reflect the tremendous reductions in forward-looking costs that have occurred in Verizon's network since then. Because the provision of local telecommunications services reflects economies of scale, scope and density, the substantial growth in demand that has occurred since 1995/1996 should yield reductions in loop and switch UNE costs. Both this Commission[5] and the Delaware Public Service Commission ("DPSC")[6] have acknowledged these effects, and my review of Verizon's ARMIS data confirms that such efficiencies have, in fact, occurred. Thus, even if (contrary to fact)

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[5] *See, for example,* Order on Remand and Report and Order, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 and Intercarrier Compensation for ISP-Bound Traffic*, CC Dockets No. 96-98 and 99-68, FCC 01-131, at 84, n.157, 93 (April 27, 2001) (citing Letter from David J. Hostetter, SBC, to Magalie Roman Salas, Secretary, FCC (Feb. 14, 2001), Attachment; Donny Jackson, "One Giant Leap for Telecom Kind?," *Telephony*, Feb. 12, 2001, at 38; Letter from Gary l. Phillips, SBC, to Magalie Roman Salas, Secretary, FCC (Feb. 16, 2001). State commissions also have recently recognized such economies of scale. *See generally, for example, Interim Opinion Establishing Interim Rates For Pacific Bell Telephone Company's Unbundled Loop And Unbundled Switching Network Elements*, issued by the Public Utilities Commission of the State of California on May 16, 2002 in Application 01-02-024, *Joint Application of AT&T Communications of California, Inc. (U 5002 C) and WorldCom, Inc. for the Commission to Reexamine the Recurring Costs and Prices of Unbundled Switching in Its First Annual Review of Unbundled Network Element Costs Pursuant to Ordering Paragraph 11 of D.99-11-050*, Application 01-02-035, *Application of AT&T Communications of California, Inc. (U 5002 C) and WorldCom, Inc. for the Commission to Reexamine the Recurring Costs and Prices of Unbundled Loops in Its First Annual Review of Unbundled Network Element Costs Pursuant to Ordering Paragraph 11 of D.99-11-050*, and Application 01-02-034, *Application of The Telephone Connection Local Services, LLC (U 5522 C) for the Commission to Reexamine the Recurring Costs and Prices of the DS-3 Entrance Facility Without Equipment in Its First Annual Review of Unbundled Network Element Costs Pursuant to Ordering Paragraph 11 of D.99-11-050*

Verizon's Delaware UNE rates were TELRIC-compliant in the year that they were computed (1997), those rates would not be TELRIC-compliant *today* (2002).

18. Analysis of Verizon's Delaware and New Hampshire net switch investments and its dial equipment minutes ("DEMs") shows that net switch investments have declined on a per-minute-of-use basis for the past several years and that net switch investment has grown much slower than DEMs.[7] The slow growth in net switch investment, combined with the explosive increase in minutes, shows that there have been 25 percent and 28 percent declines in switching investment per DEM between 1996 and 2001 for Delaware and New Hampshire, respectively. *See* Table 3 (below).[8]

19. A similar analysis shows that Verizon's Delaware and New Hampshire loop costs also have declined precipitously since they first were adopted. A simple analysis of Verizon's Delaware and New Hampshire net cable and wire ("C&W") investments and access lines confirms this fact.[9] In fact, between 1996 and 2001, Verizon's Delaware and New Hampshire

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[6] *See Application of Verizon Delaware, Inc. for Approval of its Statement of Terms and Conditions Under Section 252(f) of the Telecommunications Act of 1996,* PSC Docket No. 96-324, Phase II (June 4, 2002) (attached to VZ-DE Application at App. E-DE, Tab 33).

[7] Accumulated depreciation data in ARMIS for New Hampshire only exists at the company level. In order to calculate net investment for New Hampshire, I developed the relationship of accumulated depreciation to gross investment for Verizon's - New England Tel & Telegraph operations, and applied that ratio to the gross investment in each state

[8] The DEM data came from ARMIS 43-04. The accounts in Switching are; Analog Electronic Switching (2211), Digital Electronic Switching (2212), and Electro-Mechanical Switching (2215).

[9] Cable and wire facilities (ARMIS account 2410) contains much more than the investment in cable and wire. In fact, it includes investment in poles and associated labor and material (ARMIS account 2411), aerial cable (ARMIS account 2421), underground cable (ARMIS account 2422), buried cable (ARMIS account 2423), intrabuilding network cable (ARMIS account 2426), and conduit systems (ARMIS account 2441). These accounts, in combination, reflect the bulk of the assets associated with loops that do not use DLC. ARMIS account 2232, circuit equipment, includes DLC and other multiplexing equipment. In combination, these two major categories of investment include virtually all assets associated with loops that use DLC.

net C&W investment grew much slower than access lines, resulting in overall declines in net investment per line of 22 percent and 20 percent from 1996 to 2001 in Delaware and New Hampshire, respectively. Because Verizon's Delaware and New Hampshire UNE loop rates do not reflect these decreased costs, those rates are not appropriate forward-looking cost-based rates.

Table III

Net Investment per Unit of Demand

Facilities	Unit	1996	2001	% Difference (1996-2001)
Delaware				
Cable and Wire	Per-Line	$ 327.24	$ 219.00	**-33%**
Cable, Wire and Circuit	Per-Line	$ 496.04	$ 386.04	**-22%**
Switching	Per-DEM	$ 0.00892	$ 0.00673	**-25%**
New Hampshire				
Cable and Wire	Per-Line	$ 475.49	$ 315.02	**-34%**
Cable, Wire and Circuit	Per-Line	$ 649.54	$ 521.38	**-20%**
Switching	Per-DEM	$ 0.01374	$ 0.00989	**-28%**

IV. STATE-WIDE UNE-P ENTRY IS NOT ECONOMICALLY FEASIBLE IN DELAWARE.

20. Given Verizon's overstated UNE rates, it should be no surprise that profitable state-wide UNE-based residential entry is not possible in Delaware. The business case viability of a UNE-based offering – that is, whether it makes sense for AT&T (or any other entrant) to commit its shareholders' capital to that enterprise – is no different, analytically, from any other investment decision. The potential entrant's scarce capital must be devoted to its highest-value

uses. Thus, a carrier considering whether to enter the local services business in a state (or to continue to participate in that business) must determine whether revenues attributable to the service will exceed the costs of providing the service by an amount sufficient to generate a return that is commensurate with the expectations of investors concerning risks and returns *and* with competing uses for the capital.

21. There are three general steps in this analytical approach: (1) identifying and estimating each of the costs of providing the service, (2) identifying and estimating each of the revenue opportunities that will be generated by providing the service, and (3) deriving from these estimated "cash flows" some standard financial measure that allows the investment opportunity to be assessed (and compared to alternative investment opportunities).

22. The Commission recently offered guidance on the type of data that should be included when making these calculations. The Commission explained that, in addition to the revenues that are directly available due to local entry, several other revenue sources would be relevant to a price squeeze analysis, including intraLATA toll and interLATA toll revenue contributions, and the amount of federal and state universal service revenues that would be available to new entrants. *See, e.g., Vermont 271 Order* ¶ 71. The Commission also stated that a margin analysis should consider whether entry is viable using a mix of a UNE-based and resale-based local entry strategy. *See id.* ¶ 69.

23. As described below, my analysis accounts for all of these factors. In particular, my analysis of the level of revenues that are available to potential new entrants reflects intraLATA toll and interLATA toll revenue contributions. I have also confirmed that there is no federal and state universal service revenues available to new entrants in Delaware. My analysis also accounts for the possibility that a new entrant may enter a state using a combination of

UNE-based and resale services (my analysis assumes that an entrant adopts a UNE-based approach where that produces the highest margin, and a resale-based approach where that produces the highest margin).

24. Furthermore, my analysis is based on the internal costs of an efficient entrant. In the past, the Commission has expressed concern as to whether the well-known internal cost estimates in my analysis are those of efficient carriers. The answer to that question is yes. As explained in the declaration of Stephen Bickley, the internal cost figures on which my analysis is partly based do not reflect carriers' *current* internal costs, but are forward-looking costs that account for future savings associated with efficiencies and increased scale. *See* Bickley Decl. ¶¶ 2-11.

25. Because telecommunications carriers are subject to numerous reporting requirements, and the availability of reliable subscription market research products, obtaining the inputs necessary to conduct my analysis was relatively straightforward. Carrier-specific data, including retail local service prices, UNE prices, and access prices are largely publicly reported and directly verifiable. I am confident, therefore, that the following analysis paints an accurate picture of the entry barrier that Verizon's UNE prices in Delaware pose to residential competition.

26. The remainder of this section is organized as follows. First, I describe the costs associated with a residential UNE-Platform offering in Delaware. Second, I describe the revenues that are available to carriers serving customers in Delaware. Third, I translate these cash flows into margins by looking at the differences between the revenues that would be generated and costs that would be incurred by a new entrant carrier in Delaware – a type of financial measure commonly used by businesses to make investment decisions.

27. This margin analysis shows that profitable residential UNE-Platform-based/Resale competition cannot be undertaken by competitive carriers in Delaware. *See* Exhibit A (attached, entitled "UNE Connectivity Margin").

28. **Costs.** There are three basic categories of cost associated with UNE-Platform-based services: (1) "connectivity" costs (*i.e.*, the costs associated with purchasing the necessary network elements from the incumbent), (2) non-recurring costs, (*i.e.*, one-time costs associated with purchasing the network elements) and (3) a carrier's own internal costs of running a local telephone service business (*e.g.*, developing, maintaining and operating computer support systems, as well as marketing, customer care, and administration). My analysis focuses primarily on the first two categories of costs.

29. Verizon's Delaware monthly per line rates for non-usage sensitive switching and loop elements (UNE loops and UNE switch ports) are summarized in Table 4, below. *See also* Exhibit A- page 1 (showing the sources for this data).

Table IV

Loop and Port Cost

Delaware

	Loop	Port
Zone 1	$ 10.07	$ 2.23
Zone 2	$ 13.13	$ 2.23
Zone 3	$ 16.67	$ 2.23
Statewide Average	$ 12.22	$ 2.23

Note: The weights used to derive the state-wide averages from the zone data are based on Residential Lines only.

30. Most other network elements required for local service are charged on a usage basis. Therefore, it is necessary to combine published per minute rates with usage volumes to estimate the cost of the other network elements. As noted earlier, Delaware-specific local usage volumes are available from Verizon's annual "dial equipment minutes" ("DEMs") submissions to NECA (the same data that is used in the Commission's Synthesis Cost Model). Because local DEMs have not yet been reported for 2001, my analysis uses the 2000 data to split the intrastate minutes between toll and local minutes. This calculation of "usage minutes" retains the non-conversation time that is reflected in DEMs and is included in the cost of UNEs. My analysis assumes that there is a netting of charges for traffic terminating to a new entrant's UNE-P customer and thus originating local traffic and its associated termination is relevant for local usage on these lines. For the toll-related minutes of use ("MOU") categories, my analysis reflects the TNS Telecoms (formerly PNR) residential volumes per line from Bill Harvesting market research. These toll volumes and the calculations for local usage are detailed in Exhibit A (attached).

31. For each category of usage (*e.g.*, local, intraLATA toll, etc.), particular network architecture assumptions must be applied. Local usage must be apportioned to reflect the fact that some local calls are "intra-switch" calls (where the calling and called parties are served by the same switch) and some are "inter-switch" calls. Inter-switch calls also require assumptions regarding the portion of these calls that are routed directly between the two switches and those that are routed via a tandem. I have assumed that approximately 2% of local inter-switch minutes and 20% of intraLATA toll and interLATA minutes are tandem-routed. Approximately

35% of local calls in Verizon's network are assumed to be intra-switch calls.[10] *See* Exhibit A- page 6 (attached).

32. The calculated intra-switch, inter-switch, and tandem conversation minutes (or, in the case of toll calls, the toll direct and toll tandem conversation minutes) are then multiplied by the corresponding Verizon usage charges in Delaware to arrive at expected monthly usage costs per line. *See* Exhibit A- page 6. The total monthly usage charges per line in each zone are summarized in Table 5, below. *See also* Exhibit A- page 1 (attached).[11]

Table V

Usage Cost

	Delaware
Zone 1	$ 5.75
Zone 2	$ 5.75
Zone 3	$ 5.75
Statewide Average	$ 5.75

33. New entrants must also pay a daily usage feed ("DUF") charge. Those costs are summarized in Table 6 (below). *See also* Exhibit A- page 1.

[10] Although the Commission's Synthesis Model recognizes that about 50 percent of local calls would be intraswitch calls in an efficiently designed network with properly sized switches, the relevant figure for a new entrant contemplating entry is what it will actually pay Verizon. Because Verizon's existing network is not efficiently designed and sometimes uses two switches where one would be more efficient, the 35 percent figure must be used to determine expected connectivity costs that will be billed by Verizon to the competing carrier.

[11] UNE purchasers must pay switching, transport and related usage charges for access-related usage whether a call is originated or terminated by their customer, and the assumption is that the customer receives as much access traffic as he or she originates. For intraLATA toll traffic, every originating minute is associated with a terminating minute to another customer (for simplicity, this is assumed to be served by the same ILEC) in the ILEC's service area.

Table VI

Daily Usage Feed

	Delaware
Zone 1	$ 0.09
Zone 2	$ 0.09
Zone 3	$ 0.09
Statewide Average	$ 0.09

34. The total recurring monthly connectivity costs (loop plus usage plus DUF) incurred by new entrants to serve a customer in Delaware are summarized in Table 7 below. *See also* Exhibit A- page 1. The statewide average cost is equal to the monthly connectivity costs for the three zones, weighted by the relative number of estimated *residence* lines in each zone served by Verizon.

Table VII

Platform Recurring Cost

	Delaware
Zone 1	$ 18.14
Zone 2	$ 21.20
Zone 3	$ 24.74
Statewide Average	$ 20.29

35. In addition to the recurring monthly connectivity costs, new entrants must also pay Verizon for one-time, non-recurring costs associated with acquiring that customer (such as set-up costs). For the purpose of this analysis, I have assumed that those up-front costs will be

recovered over a period of 30 months to reflect a 2½ year customer life. Those costs are summarized in Table 8 below. *See also* Exhibit A- page 1.

Table VIII

Non-Recurring Costs

	Delaware
Zone 1	$ 0.54
Zone 2	$ 0.54
Zone 3	$ 0.54
Statewide Average	$ 0.54

36. **Revenues.** The Verizon local service rates that UNE-Platform-based providers can obtain for their services are effectively capped by the retail rates charged by Verizon. If new entrants attempt to charge higher rates than Verizon, these new entrants would be unable to attract customers.[12] Verizon local service rates are readily available and verifiable from many sources, including CCMI. The mapping of the local rates to wire centers and then mapping the wire centers to UNE zones determines the basic revenue by zone.

37. There are, of course, other revenue opportunities available to new entrants. A local service provider can expect to sell vertical features to many customers. I used data taken from the TNS Telecoms Bill Harvest market research product updated through the first quarter of 2002, to determine the average vertical feature revenue per month a new entrant can expect to

[12] In fact, this assumption probably overstates margins because if competitive entry of any sizeable scale were to occur, Verizon likely would decrease its retail rates in an effort to respond to such competition. While such reductions are the essence of competition – and obviously advantageous to consumers in the short run – those reductions also increase the risk faced by the new entrant. Thus, it is critical that UNE rates be based on properly calculated TELRIC, *i.e.*, the forward-looking costs of an efficiently configured and operated competitor. Proper pricing of

receive in Delaware. However, my analysis does not include any allowance for a federal subscriber line charge because there is no universal service funding available in Delaware.

38. In addition, a UNE-Platform-based provider earns access revenues for originating and terminating long-distance calls. This revenue may either be explicit (when a CLEC charges an independent IXC), or implicit (if the CLEC acts as its own IXC). To estimate these access revenues it is necessary to multiply expected toll minutes (derived from the TNS Telecoms Bill Harvest toll MOU data) by the relevant access charges that AT&T can replace with UNEs.[13] My calculations of amounts for estimated monthly per line access charge revenues are set forth in Exhibit A.

39. I also sought to include the amount of portable federal and state universal service fund revenues that would be available to carriers in each state. However, there were no such revenues available to potential entrants in Delaware.

40. In addition, I have computed the intraLATA and interLATA toll contributions that may be available to new entrants. This information is confidential, and is summarized in Confidential Exhibit B.

41. Table 9 summarizes the total revenues for Delaware that AT&T (or another entrant) could expect to receive from residential UNE-based service. This table excludes intraLATA and interLATA toll revenue contributions because those values are confidential (included in Confidential Exhibit B). Adding intraLATA and interLATA toll revenue contributions to the analysis shown in Table 9 has only a minor impact on the revenues.

UNEs ensures that consumers receive the full benefit of competitive pricing over the long run by maximizing the likelihood that competitors are not squeezed out of the market.

[13] Dedicated transport access charges are not included because AT&T does not avoid these access charges through its acquisition of a UNE-P local customer.

Table IX

Total Revenues (for a New Entrant)
from Residential UNE-based Services

	Delaware
Zone 1	$ 21.62
Zone 2	$ 21.38
Zone 3	$ 21.50
Statewide Average	$ 21.54

Note: The above Total Revenue is comprised of:
=>Vertical Feature Revenue
=>Federal Subscriber Line Charge Revenue
=>Access Charge Revenue

42. **Margin.** There are many standard financial measures for assessing the profitability of investing (or continuing) in a line of business. The margin per line can be computed by comparing a carrier's expected costs with its expected revenues for each line. A "gross" UNE-P margin can be determined by subtracting expected direct connectivity expenses (*e.g.*, cost of goods sold) from expected revenues. A "net" (or operating) UNE-P margin can only be determined by subtracting all expected operating expenses (*e.g.*, marketing, customer service, billing, order processing, and other operating activities) from expected revenues.

43. Also, as noted above, my analysis accounts for the possibility that a new entrant may enter a state using a combination of UNE-based and resale services by assuming, on a zone-by-zone basis, that a CLEC will adopt a UNE-based approach where that produces the highest margin, and a resale-based approach where that produces the highest margin.

44. Table 10 (below) summarizes the residential *gross* margins (for this margin-maximizing amalgam of UNE-based/Resale-based local entry) that are available to new entrants in Delaware. *See* Exhibit A- page 1.

Table X

Residential Gross Margin

	Delaware
Zone 1	$ 2.94
Zone 2	$ 2.59
Zone 3	$ 2.61
Statewide Average	$ 2.79

45. To compute a potential entrant's *net margins*, it is necessary to account for the potential entrant's internal costs of entry. As explained in the declaration of Stephen Bickley, an efficient entrant's internal costs (*e.g.*, customer care, uncollectibles, and general and administrative costs) exceed $10.00 per line per month in Delaware. *See* Bickley Decl. ¶¶ 2-11.

46. As shown in the above table, on a statewide basis, Delaware does not generate margins sufficient to recover a new entrant's internal costs of $10.00 or more of providing local services. Adding interLATA and IntraLATA toll contributions to this analysis does not change those results. *See* Confidential Exhibit B. Thus, there is no question that Verizon's Delaware UNE rates create a price squeeze that precludes competitive entry.

V. THE MARGIN ANALYSIS SUBMITTED BY VERIZON IS UNDOCUMENTED AND INACCURATE.

47. Verizon has filed its own "margin analysis" that, according to Verizon, shows that residential UNE-platform entry would be economically feasible in Delaware. *See* Martin/Garzillo/Sanford Decl. ¶¶ 78-79. Verizon's purported margin analysis should be given no weight.

48. Verizon's margin analysis is based on the assumption that all customers in Delaware will purchase Verizon's premium "Local Package" service[14]. The "Local Package" analysis is irrelevant here. The "Local Package" offering is a feature-rich premium service that costs over *** *** more than Verizon's basic package. That means that Verizon's "Local Package" margin analysis would be correct only for a new entrant that chose to seek out and serve only that minority of Delaware customers who would purchase a premium package. Such an analysis is inappropriate in the Section 271 context. Allowing Verizon to force new entrants in Delaware into a strategy that focuses only on high value customers that would purchase the "Local Package" service would contravene the public interest. All Delaware customers should enjoy the benefits from competition, not just those who are able to (and choose to) purchase particular premium services. Moreover, a targeted service offering could not be practically implemented in the long run both because all new entrants would be relegated to competing for that sliver of the market and because Verizon could respond simply by offering greater discounts on that particular bundle of services. Moreover, Verizon's analysis ignores the lower-revenue customers that subscribe to more traditional 1FR-type service (i.e., the average subscriber) not to mention the lifeline and measured service customers. Thus, Verizon's assertion that the existence of a "Local Package" offering creates profitable entry opportunities is fundamentally incorrect and inconsistent with what I understand to be the goals of Section 271.

49. In all events, Verizon's "Local Package" margin analysis cannot be relied upon to support Verizon's application because it is not properly documented and appears to contain numerous fundamental methodological errors and questionable data and assumptions. I will

[14] The alternative Verizon analysis yielding *** *** gross margin should be dismissed out of hand as it reflects "an" average Delaware retail customer" including business customers.

discuss first the issues in Verizon's revenue calculations, followed by those in Verizon's cost calculations.

50. *Revenue Calculation Errors.* Verizon's residential margin analysis assumes that entrants will receive *** *** in access revenues from the provision of UNE-platform residential services in Delaware. *See* Martin/Garzillo/Sanford Decl., Att. 4. As I show in Exhibit A- page 3, access revenues available to Delaware entrants are estimated to be $1.77/line/month. It is impossible to determine why Verizon's access revenue estimates are so inflated because Verizon has provided little information as to how it developed its margin analysis. In fact, the information they provide only clouds matters. Verizon's May12, 2002 letter to Delaware PSC purports to document the access calculation of $2.96. But that documentation is based on an undocumented access revenue value of about $20 million, whereas ARMIS shows switched access revenue to be less than $13 million in 2001 for Delaware and average access revenue per average switched line of $1.79.[15] Similarly, Verizon's analysis of toll revenue appears to be flawed. Thus, there is no question that Verizon's revenue analysis is unsupported and appears to contain fundamental errors.

51. *Cost Calculation Errors.* Verizon's cost calculations and assumptions also are flawed. Most notably, Verizon inappropriately includes business data in its margin analysis, thereby biasing the resulting statewide average costs. Verizon's approach understates the average residential cost of a loop in Delaware by $0.19 ($12.22 based on a residential versus *** *** when business data are included). Without supporting documentation for its

[15] Verizon's May12,2002 letter to Delaware PSC purports to document the access calculation of $2.96. But that documentation is based on an undocumented access revenue value of about $20 million, whereas ARMIS shows switched access revenue to be less than $13 million in 2001 for Delaware and average access revenue per average switched line of $1.79.

analysis, Verizon's contamination of the residence margin calculation with business data leads me to question what other Verizon data and assumptions also reflect business specific data.[16]

52. Second, Verizon's purported margin analysis includes a *** *** cost labeled "Other." It is not possible to determine what that "Other" cost is meant to represent, and I do not speculate here.

53. In sum, Verizon's margin analysis cannot be given any credit. Verizon's purported margin analysis fails to show any of the assumptions or underlying data used to compute its margins. By contrast, my margin analysis is fully documented and can readily be reproduced and tested by the Commission or any interested party.

VI. CONCLUSION

54. Based on my analysis, there is no question that Verizon's Delaware UNE rates are substantially inflated by clear TELRIC errors. There is in fact a price squeeze and, hence, competitive entry (from CLEC's such as AT&T as well as others) is precluded in Delaware. In addition, the switching UNE rates in New Hampshire are overstated and fail to satisfy the Commission's benchmarking test.

[16] This problem is particularly important because the average business loop cost is lower than the average residential loop cost and the average business customer has more toll minutes per line per month (and will receive more access revenue and toll revenue than a residential customer).

VERIFICATION PAGE

I declare under penalty of perjury that the foregoing Declaration is true and correct.

/s/ Michael Lieberman

Michael Lieberman

Executed on: July 17, 2002

Exhibit A ---------->

Connectivity Margin for Verizon Delaware

Exhibit A

COSTS	Statewide Average	Zone 1	Zone 2	Zone 3
Zone weights		56%	21%	23%
Loop	$12.22	$10.07	$13.13	$16.67
Port	$2.23	$2.23	$2.23	$2.23
Usage	$5.75	$5.75	$5.75	$5.75
DUF	$0.09	$0.09	$0.09	$0.09
Platform - Recurring Cost	$20.29	$18.14	$21.20	$24.74
Conversion Chg. (Spread over 30 month customer life)	$0.54	$0.54	$0.54	$0.54
Total Platform (w/NRC)	$20.83	$18.68	$21.74	$25.28

	New Install	$ 138.12
	Migration	$ 2.67
56%	% New Install	10%
21%	Customer life	30
23%		

REVENUES	RES @ VZ DE	
Basic Local Svc		
Zone 1	$	12.00
Zone 2	$	11.77
Zone 3	$	11.88
Basic Local Svc -Statewide	$	11.92
Other Revenue Sources		
Features	$	1.85
Subscriber Line Charge	$	6.00
IntraLATA Toll Contribution		*Proprietary*
InterLATA Toll Contribution		*Proprietary*
Access	$	1.77
Total Revenue		
Zone 1	$	21.62
Zone 2	$	21.38
Zone 3	$	21.50
Total Revenue -Statewide	$	21.54

TNS Bill Harvest 2Q00 - 1Q02

MARGINS - RES @ VZ NH		Level	%
Zone 1	$	**2.94**	**14%**
Zone 2	$	**(0.36)**	**-2%**
Zone 3	$	**(3.78)**	**-18%**
Residence Statewide Connectivity margin	$	**0.71**	**3%**

TSR (W Incr Toll)		
TSR - Discount		19.0%
Zone 1	$	2.64
Zone 2	$	2.59
Zone 3	$	2.61
TSR Margin (Incl Incr Toll)	$	2.62

Amalgam Margins			Line Distribution
Zone 1	$	2.94	56%
Zone 2	$	2.59	21%
Zone 3	$	2.61	23%
TSR Margin	$	2.79	

Residential Toll Conversation MOU Per line Per Month

Average Residential Toll Minutes 2Q00 - 1Q02

Exhibit A

Verizon		Delaware
Intra-Lata	Intra-State	23.9
	Inter-State	4.5
Inter-Lata	Intra-State	-
	Inter-State	78.7

Source: TNS ReQuest Market Monitor and Bill Harvesting Study

ARMIS-Based Local DEM Per line Per Month

	2001 Per Line Per Month Local DEM	Local DEM per line CAGR: 2001 vs 1998	Estimated 2002 Per Line Per Month Local DEM
2-Way DEM per Line	1,543	5.5%	1,629
1-Way DEM per Line	772		814

EXHIBIT A, PAGE 3
REDACTED FOR PUBLIC INPSECTION

Basic Local Rates

Local Calling Areas	Monthly Line Charge (Including TouchTone)	# of Wire Centers	# of Lines	# of Exchanges
1x	$ 11.34	0	-	0
2x	$ 11.34	2	28,917	2
3x	$ 11.34	3	15,133	3
1z	$ 12.00	9	232,471	6
2z	$ 12.00	7	55,056	7
3z	$ 12.00	12	48,750	12
Totals/Avg.	$ 11.92	33	380,326	30

Local Rate effective date 4/2/2002

Average Monthly Feature Revenue Per Bill	**$**	**1.85**

Source: TNS Bill Harvesting Study, 2Q00 - 1Q02

Basic Local and UNE Loop Rates by UNE Zone

Exhibit A

UNE Rate Zone	Res Lines	UNE Loop Price	Average Local Rate	# of Wire Centers	Line Distribution
1	212,562	$ 10.07	$ 12.00	7	56%
2	81,313	$ 13.13	$ 11.77	8	21%
3	86,451	$ 16.67	$ 11.88	18	23%
Totals/Avg.	**380,326**	**$ 12.22**	**$ 11.92**	**33**	**100%**

UNE Unit Cost Development

		Local			Intralata toll		Intrastate InterLATA		Interstate InterLATA	
			Interswitch local		Up to IXC POP					
	Rates	Intraswitch local	Direct	Tandem	Intralata toll direct	Intralata toll tandem	Interlata toll direct	Interlata toll tandem	Interlata toll direct	Interlata toll tandem
EO Switching - Orig	$ 0.003634	1	1	1	1	1	1	1	1	1
Common Switched xport-Term	$ 0.000144		1	2		1		1		1
Tandem switching usage	$ 0.006688			1		1		1		1
EO Switching - Term	$ 0.001927	1	1	1						
		$ 0.005561	$ 0.005705	$ 0.012537	$ 0.003634	$ 0.010466	$ 0.003634	$ 0.010466	$ 0.003634	$ 0.010466
MOU		285.0	518.7	10.6	45.4	11.3	0.0	0.0	125.9	31.5
Cost per Line		$ 1.585	$ 2.959	$ 0.133	$ 0.165	$ 0.119	$ -	$ -	$ 0.457	$ 0.329

MOU Assumptions	Outbound	Inbound	total	intraoffice	tandem
Local	814	-	814	35%	2%
IntraLATA Toll	28	28	57	0%	20.0%
Intrastate InterLATA	-	-	-	0%	20.0%
Interstate InterLATA	79	79	157	0%	20.0%
Total	921	107	1,028		

Call Record Calculation

	Conversation MOU/MSG	Calls
Local	4	204
IntraLATA Toll	4	14
Intrastate InterLATA	4	-
Interstate InterLATA	5	31
		249

UNE Usage Cost by Service

	% MOU	UNE Cost	Cost per Line
Local			
Intraswitch local	35%	$ 0.005561	
Interswitch direct local	64%	$ 0.005705	
Interswitch tandem local	1%	$ 0.012537	
		$ 0.005743	4.68
IntraLATA Toll			
Up to IXC POP			
intralata toll direct	80%	$ 0.003634	
intralata toll tandem	20%	$ 0.010466	
		$ 0.005000	0.28
Intrastate InterLATA			
interlata toll direct	80%	$ 0.003634	
interlata toll tandem	20%	$ 0.010466	
		$ 0.005000	-
Interstate InterLATA			
interlata toll direct	80%	$ 0.003634	
interlata toll tandem	20%	$ 0.010466	
		$ 0.005000	0.79
Total Cost Per Line			**$ 5.75**

Delaware

UNE-P: Current UNE Rates

Exhibit A

	By Density Zone	Urban	Suburban	Rural	Statewide
A.	Residence Line Distribution	56%	21%	23%	100%
B.	Loop	$ 10.07	$ 13.13	$ 16.67	$12.22
C.	Analog Line Side Port	$ 2.23	$ 2.23	$ 2.23	$2.23
D.	Local Switch Usage - Orig				$ 0.003634
E.	Local Switch Usage - Term				$ 0.001927
F	Local Switch - Common Trunk Port				
G	Tandem Switching				$ 0.006688
H	Tandem Switching - trunk port				
I	Common Transport - per min per mile				$0.0000022
J	Common Transport - per min				$0.0001221
K	DUF: Per Record Processed				$0.0002618
L	DUF: Per Record Transmitted				$0.0000957

Verizon Delaware_Daily Usage File Calculation

Exhibit A

		Recurring Charges		
Miscellaneous Costs				
Daily Usage File / Call	$	0.000262	$	0.065247
Network Data Mover (0.000096 per call)	$	0.000096	$	0.023851
	$	0.000358	$	0.089098

EXHIBIT B
REDACTED FOR PUBLIC INPSECTION